

Application of: Linden A. DECARMO
Serial No.: 09/477,101
Filed: January 4, 2000
Reply to Office Action of July 8, 2005

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): In a computer system for internet telephony, a method, performed at a manager, of distributing call flow events among a plurality of threads, each thread having an associated a dedicated call flow event queue in which call flow events are queued, the method comprising:

- A. determining a call flow workload level for each of the plurality of threads;
- B. determining that a first of the plurality of threads is inefficiently handling its assigned call flow workload; and
- C. reassigning a call flow event from the call flow event queue associated with dedicated to the first thread to the call flow event queue associated with dedicated to a second of the plurality of threads.

Claim 2 (Previously Presented): The method according to claim 1 further comprising the step:

- D. processing the call flow events associated with each of the plurality of threads.

Claim 3 (Previously Presented): The method according to claim 1 wherein step C further comprises:

- C.1 removing a call flow event from the call flow event queue associated with the first thread; and
- C.2 placing the removed call flow event in the call flow event queue associated with the second thread.

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Claim 4 (Previously Presented): The method according to claim 1 wherein step C further comprises:

C.1 selecting the second thread in accordance with the number of call flow events in the call flow event queue associated with the second thread.

Claim 5 (Previously Presented): The method according to claim 1 wherein step C further comprises:

C.1 allocating the call flow events to a thread within the computer system with the least call flow load.

Claim 6 (Previously Presented): The method according to claim 1 wherein step B further comprises:

B.1 determining whether the number of call flow events in the call flow event queue associated with a thread has exceeded a predetermined criteria.

Claim 7 (Previously Presented): The method according to claim 1, wherein step A comprises:

A.1 assigning call flow events among the call flow queues associated with the respective plurality of threads in the system.

Claim 8 (Currently Amended): A computer program product for use with a computer system for internet telephony, the computer system operatively coupled to a computer network and capable of communicating with one or more processes over the network, the computer program product comprising a computer usable medium having

Application of: Linden A. DECARMO
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program code embodied in the medium, the program code being operable at a manager and comprising:

(A) program code configured to determine a call flow workload level for each of a plurality of threads;

(B) program code configured to determine that a first of the plurality of threads is inefficiently handling its assigned call flow workload; and

(C) program code configured to reassign a call flow event from the call flow event queue associated with dedicated to the first thread to the call flow event queue associated with dedicated to a second of the plurality of threads.

Claim 9 (Previously Presented): The computer program product of claim 8, further comprising:

(D) program code configured to process the call flow events within each of the plurality of threads.

Claim 10 (Previously Presented): The computer program product according to claim 8 further comprising:

(C.1) program code configured to remove a call flow event from the call flow event queue associated within the first thread; and

(C.2) program code configured to place the removed call flow event in the call flow event queue associated with the second thread.

Claim 11 (Previously Presented): The computer program product according to claim 8 further comprising:

Application of: Linden A. DECARMO
Serial No.: 09/477,101
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(C.1) program code configured to select the second thread in accordance with the number of call flow events in the call flow event queue associated with the second thread.

Claim 12 (Previously Presented): The computer program product according to claim 8 further comprising:

(C.1) program code configured to allocate the call flow events to a thread within the computer system with the least call flow load.

Claim 13 (Previously Presented): The computer program product according to claim 8 further comprising:

(B.1) program code configured to determine whether the number of call flow events in the call flow event queue associated with a thread has exceeded a predetermined criteria.

Claim 14 (Previously Presented): The computer program product according to claim 8, further comprising:

(A.1) program code configured to assign call flow events among the call flow event queues associated with the respective plurality of threads in the system.

Claim 15 (Currently Amended): In a computer system for internet telephony, an apparatus for distributing call flow events among a plurality of threads, each thread having an associated a dedicated call flow event queue in which call flow events are queued, the apparatus comprising:

a processor including:

Application of: Linden A. DECARMO
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a call flow engine configured to execute call flow events associated with one of the threads;

a call flow manager configured to distribute a plurality of call flow events among a plurality of threads used for managing the processing of a plurality of call flows, the call flow manager optimizing the processing of the call flows by determining which of the plurality of threads are operating inefficiently and reassigning a portion of the call flow events assigned to the dedicated call event queue of the inefficient thread to the dedicated call event queue of another of the plurality of threads having excess call flow processing capacity.

Claim 16 (Previously Presented): The apparatus of claim 15 wherein the call flow manager continues to reassign call flow events until a balanced call flow event processing level is attained among the plurality of threads.

Claim 17 (Previously Presented): The method according to claim 1, further comprising:

D. determining whether a call flow balance has been achieved among the plurality of threads;

E. processing the call flow events associated with each of the plurality of threads.

Claim 18 (Previously Presented): The computer program product according to claim 8, further comprising:

(D) program code configured to determine whether a call flow balance has been achieved among the plurality of threads;

Application of: Linden A. DECARMO
Serial No.: 09/477,101
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(E) program code configured to process the call flow events associated with each of the plurality of threads.

Claim 19 (Previously Presented): The apparatus according to claim 15, wherein the call flow manager determines which of the plurality of threads are operating inefficiently by determining whether any of the threads has exceeded its maximum call flow capacity.